

REMARKS

Claims 1-5 and 7-15 are pending in the application.

Claim 6 is cancelled from the application without prejudice.

No new matter is added to the application by way of this drawing amendment.

I. THE SECTION 112, 1st AND 2nd PARAGRAPH REJECTIONS OF CLAIM 6

The examiner rejected claim 6 under both the first and second paragraphs of Section 112.

The examiner's rejections have been rendered moot because of Applicant's cancellation of claim 6 from the application above.

II. THE OBVIOUSNESS REJECTIONS

The Applicant notes that the examiner has rejected the claims over a combination of references yet identifies the rejections as rejections under 102(b). The Applicant believes the examiner's reference to Section 102(b) is in error and that the examiner intended to refer to Section 103 and is accordingly traversing the claim rejections below on the basis that they are made under Section 103. The Applicant also notes that the examiner has not specifically included claims 2-3 in any rejection summary. However, the examiner discusses claims 2-3 at page 4 of the Office Action and appears to reject claims 2-3 on the same grounds as independent claim 1.

The examiner rejected claims 1 and 4-15 (actually claims 1-9 and 13-15?) for being obvious over Brieger (USP 4,756,371) in view of Yang et al. (USP 6,520,258). The examiner further rejected claims 10-12 for being obvious over Brieger and Yang in view of Willis (5,564,999). The examiner's obviousness rejections are traversed below.

A. The Examiner's Obviousness Rejection Is Premised Upon An Erroneous Construction Of The Claim Term "Composite Material"

One feature of the claimed carrier of the present invention is a "housing at least partially formed from a composite material." The examiner continues, in the present obviousness rejection, to take the position that just about any material is a composite material. Indeed, the examiner's insistence that just about any material is a composite material has led the Applicant to unnecessarily lengthen and complicate claim 1 by adding the phrase "wherein the composite material is not steel".

The examiner is reminded that the meaning of the claim term “composite material” must be derived from the applicant’s specification. Specifically, the examiner must determine the scope of claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction "in light of the specification as it would be interpreted by one of ordinary skill in the art." *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364[, 70 USPQ2d 1827] (Fed. Cir. 2004). Indeed, the rules of the PTO require that application claims must "conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description." 37 CFR 1.75(d)(1). Thus, the examiner must consult the present application in construing the claim term “composite material”.

Below is an excerpt from the instant application that discusses “composite materials”.

[0028] The composite material used either as an overwrap for a steel cylinder 14 or in fabricating an entire gun 11 is selected to add additional strength amongst other improvements to the physical performance of the gun. Thus, a composite material may be formed from a reinforced polymeric material. Some non-limiting examples of reinforcement include providing reinforcement by a preform or in a variant of the embodiment using individual rovings.

[0029] The preform may be fabricated by hand layup, filament winding, compression moulding or braiding using a binder to maintain the desired profile, to give just four examples. A matrix into which a solid material loading is added, can include one or more plastics material. The plastics material will be selected from types including, but not limited to one or more of the following, namely thermosets, thermoplastics and elastomers. It will be appreciated that the selection of a plastics material is, to a great part, made on the basis of its performance at the temperatures likely to obtain with a completion. In some circumstances, a gun 11 may remain within a casing 9 for extended periods before it is used. Thus the plastics material may need to be selected to withstand not only raised temperature, perhaps 200° C. but to maintain performance at elevated temperature for a significant period of days or even weeks.

[0030] It has been determined that of the class of thermoplastics, materials such as polystyrene, polymers of olefins containing 2 to 10 carbon atoms such as polyethylene and polypropylene are suitable for selection up to temperatures of around 200° C. Around and above this temperature, plastics material having higher melting points such as polyethersulfone (PES), polyoxymethylene (POM) and PK for example, can be utilised.

The “composite materials” discussed above include at minimum two parts, a binder and a

reinforcing material. In the excerpt above, examples of reinforcing materials are rovings, windings and filaments and examples of binders or polymers, thermoplastics and the like. Thus, the Applicant asserts that a composite material, broadly construed, would be understood to include a binder element and a reinforcing element.

Based upon this construction of the term “composite material”, Applicant previously explained to the examiner that no chemist, no metallurgist and no materials scientist would ever regard steel as being a composite. Similarly, as explained below, Applicant now apparently has to explain to the examiner that a reference to a plastic or a metal or an elastomer in the specification or in the prior art is not a disclosure of a composite.

As further support of the examiner’s erroneous construction of the claim term “composite material”, the Applicant hereby supplies another online dictionary reference to assist examiner’s understanding.

<http://metals.about.com/library/bldef-Composite-Material.htm>

Composite Material

Definition: A combination of two or more materials (reinforcing elements, fillers, and composite matrix binder), differing in form or composition on a macroscale. The constituents retain their identities, that is, they do not dissolve or merge completely into one another although they act in concert. Normally, the components can be physically identified and exhibit an interface between one another. Examples are cermets and metal-matrix composites.

If the examiner agrees with Applicant’s construction of the term “composite material”, then the examiner must withdraw the current obviousness rejections. That is because neither Brieger nor Yang discloses housings made of a composite material as presently claimed. If the examiner disagrees with Applicant’s construction of the term “composite material”, then the Applicant asks that the examiner to define the term in the next Office Action.

B. The Examiner’s Assertion That Yang Discloses A Housing Made Of A Composite Material Is Erroneous

The examiner rejected claims 1, 4-15 as being obvious over Brieger (USP 4,756,371) in view of Yang et al. (USP 6,520,258). The examiner is citing Brieger as an example of a prior art

carrier that is capable of containing any debris created from the explosion within the carrier. However, Brieger is merely an example of a prior art steel carrier, which is known to contain the debris. The examiner then relies upon Yang to teach that the sleeve 512 is formed from a composite material. That is not correct. Yang does not disclose a sleeve 512 that is a composite material.

Applicant previously pointed out in our Reply filed May 4th 2010 accompanying the RCE that Yang does not disclose a sleeve 512 made of a composite. Despite this, the examiner states that Yang teaches a composite material that is not steel, i.e. “plastic or elastomer” (i.e. fig 3A, col. 7:12). Referring to the cited Yang excerpt, it actually discloses that the sleeve 512 “is formed of any type of material that is able to provide structural support, such as plastic, metal, elastomer and so forth. The sleeve 512 is designed to protect the encapsulant...” However, a sleeve made of plastics or an elastomer or a metal is NOT a composite material sleeve unless it has another different material disposed in the plastics. That is to say, a filler material, which may be fibrous or particulate, disposed within a plastics or elastomeric matrix will form a “composite” but the prior art document’s reference to an elastomer, plastics or metal is merely referring to a homogeneous material – not one with a combination of two or more materials. Hence, there is no disclosure of a composite sleeve 512. For this reason independent claim 1 and all pending application dependent claims are non-obvious and patentable over the cited prior art.

C. The Examiner’s Assertion That Encapsulant 510 Of Yang Is An “Inner Housing” Is Erroneous

Independent claim 1 further requires that the housing composite material is both “non-frangible” and “arranged to substantially contain debris contained within the carrier”. Claim 2 goes on to require the housing of claim 1 to have an “inner housing”. The examiner appears to take the position that feature 510 of Yang is an inner housing and that it serves the function of containing debris as required by claims 1 and/or 2. The examiner’s position that feature 510 of Yang is an “inner housing” is clearly erroneous because feature 510 of Yang is an encapsulant material that is located inside and is surrounded and protected by housing 512. It does not form part of the housing as the examiner maintains. Indeed, the following excerpt of Yang reinforces Applicant’s point:

To provide structural support for the encapsulant 510, a sleeve 512 is provided around the encapsulant 510. The sleeve 512 is formed of any type of material that

is able to provide structural support, such as plastic, metal, elastomer, and so forth. The sleeve 512 is also designed to protect the encapsulant 510 as the gun system 56A is run into the wellbore and it collides with other downhole structures. Alternatively, instead of a separate sleeve, a coating may be added to the outer surface of the encapsulant 510. The coating adheres to the encapsulant as it is being applied. The coating may be formed of a material selected to reduce fluid penetration. The material may also have a low friction.

(Yang col. 7, lines 9-20). Moreover, encapsulant 510 is identified as being cement and the application Figures – e.g., Figure 3A – shows the encapsulant 510 filling the entire space between housing 512 and linear strip 502. Therefore, a complete reading of Yang makes it clear that encapsulant 510 is not part of the Yang housing and, therefore, cannot be relied upon for disclosing a composite material arranged to substantially contain debris of independent claim 1 or the inner housing of claim 2.

III. OFFICIAL NOTICE

The examiner continues to take Official Notice of the features of several dependent claims. The Applicant refutes all the OFFICIAL NOTICE statements made by the examiner. Whether a composite is made with a particulate filler or fibrous filler is itself a technical decision that needs to be carefully made, and if a fibrous filler is used, whether to use it in random arrangements (of the fibres – the more usual arrangement) or specific aligned configurations is not a straightforward decision. Hence examiner's allegations concerning the use of fiber arrangements with respect to claims 10 to 12 are unjustified and unsupported. Moreover, examiner has failed to understand that claim 12 refers to a carrier in which circumferentially arranged fibres have respective predetermined tensions. The claim is not referring to a “predetermined tension of the composite material”. Therefore, the examiner's Official Notice is insufficient to provide a prima facie case of obviousness of claim 12.

IV. THE PRIORITY DOCUMENT

The applicant traverses the examiner's requirement for a priority document for this case. This is a Rule 371 application and PCT rules regarding supplying the priority document apply here. Because an original certified priority document was timely provided to the International Bureau under PCT Rule 17.1, in accordance with PCT Rule 17.2(a), the USPTO cannot require

the Applicant to provide an original priority document to the U.S. Patent Office as the examiner has. Instead, all that the examiner can require is a copy of the priority document which is attached at Appendix B of this Reply.

PCT Rule 17.1(a-b) requires a priority document be filed with an international application or that it be received by the International Bureau or receiving Office on a request made by the applicant. PCT Rule 17.2(a) provides that the International Bureau shall promptly supply a copy of the priority document to a requesting receiving Office. Rule 17.2(a) goes on to state that “No such Office shall ask the applicant himself to furnish it with a copy.”. Attached at Appendix A is a copy of form PCT/IB/304 for the parent of the above-application that indicates the priority document for this application was received by the International Bureau. Therefore, under Rule 17.2(a), the examiner cannot require the applicant to supply a certified priority document in this case.

It would appear that the examiner can require the applicant to provide a copy of the priority document however. Therefore, as a courtesy, the applicant is attaching a copy of the certified priority document at Appendix B of this Reply for entry into this case and for the examiner’s consideration and acceptance.

CONCLUSION

Claims 1-5 and 7-15 are believed to be ready for patenting for the reasons recited above. Favorable reconsideration and allowance of all pending application claims is, therefore, courteously solicited.

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